AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (presently amended) A speech synthesizing method comprising:

the division step of acquiring partial speech segments by dividing a speech segment in a predetermined unit with a phoneme boundary;

the estimation step of estimating a power value of each partial speech segment obtained in the division step on the basis of a parameter value acquired for each partial speech segment independently;

the changing step of changing the power value of each of the partial speech segments on the basis of the power value estimated in the estimation step; and

the generating step of generating synthesized speech by using the partial speech segments changed in the changing step.

2. (presently amended) The method according to claim 1, wherein

in the changing step, for each of the partial speech segments,

a corresponding reference power value is acquired based on the partial speech segment and the other portion of a speech segment to which the partial speech segment belongs,

an amplitude change magnification is calculated on the basis of the power value estimated in the estimation step and the acquired reference power value, and

a change to the estimated power value is made by changing an amplitude

of the partial speech segment in accordance with the calculated amplitude change

magnification.

3. (original) The method according to claim 2, wherein in the changing step, an

amplitude value of the partial speech segment is changed by using, as an

amplitude change magnification, s being obtained by

$$s = (p/q)^{\frac{1}{2}}$$

where p is the power value estimated in the estimation step, and q is the acquired

reference power value.

4. (original) The method according to claim 1, wherein

the estimation step further comprises the determination step of

determining whether each of the partial speech segments is a voiced or unvoiced

sound, and

if it is determined that the partial speech segment is a voiced sound, a

power value is estimated by using a parameter value for a voiced speech segment,

and if it is determined that the speech segment is an unvoiced sound, a power

value is estimated by using a parameter value of an unvoiced speech segment.

5. (original) The method according to claim 4, wherein

the estimation step further comprises the acquisition step of acquiring a

power estimation factor for each of the partial speech segments, and

a parameter value corresponding to the acquired power estimation factor is acquired in accordance with a determination result obtained in the determination step.

6. (original) The method according to claim 5, wherein the power estimation factor includes one of a phoneme type of the partial speech segment, a mora position of a synthesis target word of the partial speech segment, a mora count of the synthesis target word, and an accent type.

7. (original) The method according to claim 5, wherein in the acquisition step, a power estimation factor for a voiced sound is acquired if it is determined in the determination step that the partial speech segment is a voiced sound, and a power estimation factor for an unvoiced sound is acquired if it is determined that the partial speech segment is an unvoiced sound.

8. (original) The method according to claim 4, wherein

in the change step, a reference power value of the partial speech segment is acquired, and an amplitude of the partial speech segment is changed on the basis of the power value estimated in the estimation step and the acquired reference power value, and

the reference power value corresponding to a partial speech segment of an unvoiced sound is set to relatively large.

9. (original) The method according to claim 1, wherein the speech synthesis unit is CV/VC.

10. (original) The method according to claim 1, wherein the speech synthesis unit is VCV.

11. (presently amended) A speech synthesizing apparatus comprising:

division means for acquiring partial speech segments by dividing a speech segment in a predetermined unit with a phoneme boundary;

estimation means for estimating a power value of each partial speech segment obtained by said division means on the basis of a parameter value acquired for each partial speech segment independently;

changing means for changing the power value of each of the partial speech segments on the basis of the power value estimated by said estimation means; and

the generating means for generating synthesized speech by using the partial speech segments changed by said changing means.

12. (presently amended) The apparatus according to claim 11, wherein

said changing means, for each of the partial speech segments,

acquires a corresponding reference power value based on the partial speech segment and the other portion of a speech segment to which the partial speck segment belongs,

calculates an amplitude change magnification on the basis of the power

value estimated by said estimation means and the acquire reference power value, and

makes a change to the estimated power value by changing an amplitude of the partial speech segment in accordance with the calculated amplitude change magnification.

13. (original) The apparatus according to claim 12, wherein said changing means changes an amplitude value of the partial speech segment by using, as an amplitude change magnification, s being obtained by

$$s = (p/q)^{\frac{1}{2}}$$

where p is the power value estimated by said estimation means, and q is the acquired reference power value.

14. (original) The apparatus according to claim 11, wherein

said estimation means further comprises determination means for determining whether each of the partial speech segments is a voiced or unvoiced sound, and

if it is determined that the partial speech segment is a voiced sound, a power value is estimated by using a parameter value for a voiced speech segment, and if it is determined that the speech segment is an unvoiced sound, a power value is estimated by using a parameter value of an unvoiced speech segment.

15. (original) The apparatus according to claim 14, wherein

said estimation means further comprises acquisition means for acquiring a

power estimation factor for each of the partial speech segments, and

a parameter value corresponding to the acquired power estimation factor is

acquired in accordance with a determination result obtained by said determination

means.

16. (original) The apparatus according to claim 15, wherein the power estimation

factor includes one of a phoneme type of the partial speech segment, a mora

position of a synthesis target word of the partial speech segment, a mora count of

the synthesis target word, and an accent type.

17. (original) The apparatus according to claim 15, wherein said acquisition

means acquires a power estimation factor for a voiced sound if it is determined by

said determination means that the partial speech segment is a voiced sound, and

acquires a power estimation factor for an unvoiced sound if it is determined that

the partial speech segment is an unvoiced sound.

18. (original) The apparatus according to claim 14, wherein

said change means acquires a reference power value of the partial speech

segment, and changes an amplitude of the partial speech segment on the basis of

the power value estimated by said estimation means and the acquired reference

power value, and

the reference power value corresponding to a partial speech segment of an

unvoiced sound is set to relatively large.

19. (original) The apparatus according to claim 11, wherein the speech synthesis unit is CV/VC.

20. (original) The apparatus according to claim 11, wherein the speech synthesis unit is VCV.

21. (original) A storage medium storing a control program for making a computer implement the method defined in claim 1.